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Rising water, algae blooms impact Lake Erie fishing

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Fluctuating temperatures and water levels on the Great Lakes could have a long-term effect on fishing. This year, a Lake Erie guide put this charter from Saxonburg on walleye. Left to right, Phil Kohley, Nick Kohley, Rich Depace and Doug Hopkins. SOURCE handout

By John Seewer and John Flesher / Associated Press

TOLEDO, Ohio — As the Great Lakes grow greater in volume, the new depths and temperatures are having a negative effect on the fishing. Perch and walleye were not where anglers expected them to be this summer, which some scientists said could be attributed to a variety of changes in water volume and temperature.

The algae bloom that spread across Lake Erie this summer was the largest on record and left behind a thick, paint-like scum that covered an area roughly the size of New York City, government scientists said.

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The bloom fueled by heavy summer rains surpassed the record-setting algae outbreak in 2011 that stretched from Toledo to Cleveland, said the National Oceanic and Atmospheric Administration. Scum from the bloom covered about 300 square miles in early and mid-August.

But the actual bloom was much larger. Just how big is still being determined, though it was clearly bigger than anything measured so far, said Richard Stumpf, a NOAA researcher.

The massive algae colony this year stayed toward the center of Lake Erie between Canada and Ohio and away from the shoreline, which lessened the impact on boaters and drinking water plants, he said.

Toxins from a much smaller bloom in August 2014 contaminated the tap water for 400,000 people in the Toledo area and a sliver of southeastern Michigan.

Heavy rains across northern Ohio in June and July washed huge amounts of algae-feeding phosphorus into the lake. Algae blooms — linked to phosphorus from farm fertilizers, livestock manure and sewage treatment plants — have taken hold in the western third of the lake over the last decade and colored some of its waters a shade of green that looks like pea soup.

The blooms, which usually peak from the middle of August through the end of September, also have been blamed for contributing to oxygen-deprived dead zones where fish can't survive.

Ohio, Michigan and Ontario agreed in June to sharply reduce the amount of phosphorus flowing into western Lake Erie within the next 10 years. Some changes limiting when farmers can spread fertilizer and manure on fields have been made, but it will take at least a few years to see improvements.

"It would be hard to find much evidence of progress based on what we saw this year," said Jeff Reutter, former director of the Ohio Sea Grant Program, which studies water quality issues.

One of those concerns is the water level. After years of decreasing volume in the lakes, the U.S. Army Corps of Engineers reported in December, 2014, that water levels in all of the lakes — Superior, Michigan, Huron, Erie and Ontario — were above seasonal averages and rising for the first time since 1998. Lake Erie was 9 inches above the seasonal average, and through June 2015 it was expected to reach 5 to 11 inches above last year’s average and 6 to 8 inches above its long-term average.

The rising waters were attributed to two years of long “polar vortex” winters and wet springs. Chuck Murray, Lake Erie biologist for the Pennsylvania Fish and Boat Commission, said the unusual water conditions made it harder for anglers to find yellow perch and walleye. Water levels were high but temperatures low.

Murray said routine summer research netted typical numbers of perch at 50 feet — their stomachs filled with spiny water fleas. But anglers told him perch weren't schooling as much, and walleye were caught in unusual places, mostly in waters deeper or more shallow than usual. Many walleye were hugging shorelines or at 45-50 feet in the First Trench.

The high-water trend is expected to continue. Water levels throughout the Great Lakes should remain mostly above average over the next six months as a powerful El Nino gives the region a break after two bitterly cold winters, but it's unclear whether there will be long-term effects, federal scientists said.

El Nino, the warming of surface waters in the Pacific Ocean that can significantly influence weather in North America, is expected to bring milder temperatures and less snow across the lakes that hold nearly one-fifth of the world's surface fresh water, National Weather Service hydrologist Jim Noel said.

Those conditions are unlikely to alter the seasonal pattern of Great Lakes levels, which tend to rise in spring, peak in summer and decline in fall, said Keith Kompoltowicz, hydrology chief with the U.S. Army Corps of Engineers' district office in Detroit. But the fluctuations may be less pronounced than usual, partly because of El Nino's effects on evaporation and precipitation.

"We don't see any extreme events in terms of lake levels on the horizon," Kompoltowicz said as scientists released an updated forecast for the Great Lakes, which have refilled after a prolonged draining that lasted from 1998 through 2012.

Lakes Huron and Michigan have shown the most dramatic improvement, rising nearly 3 feet — the biggest two-year jump on record for those waters. It's been a relief for cargo shippers, marina owners and property owners along shorelines where retreating water had given way to muck and weeds.

Mild air temperatures this fall may lower evaporation rates, resulting in less of a drop-off in water levels than usual, Kompoltowicz said. But if snowfall declines this winter as expected, the spring rise in water levels might also be reduced. Spring snowmelt is a key factor in determining lake levels.

Lakes Superior, Huron, Michigan and Erie should remain at above-average levels for the next six months, he said. Lake Ontario, which is controlled by a hydroelectric dam on the St. Lawrence River, is expected to be near or slightly below its long-term average.

The scientists were reluctant to extend their predictions beyond six months, although Kompoltowicz said a return to colder temperatures in fall 2016 could bring greater-than-usual evaporation. They noted that Great Lakes water levels have gone in different directions after the two strongest El Ninos prior to the current one.

After a powerful El Nino in 1982-83, the lakes rose and hit record highs by 1986. But another El Nino in 1997-98 was followed by a nearly 15-year decline.

"That just shows there's a lot more in play here, and it's impossible to pin a lot of what we can expect in terms of levels on the Great Lakes to just one climate signal," Kompoltowicz said.

John Hayes contributed.